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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/587,352	06/05/2000	Naofumi Kobayashi	FUJY 17.397	7433

7590 11/15/2004

Katten, Muchin, Zavis & Rosenman
575 Madison Ave.
New York, NY 10022-2585

EXAMINER	
FERRIS, DERRICK W	
ART UNIT	**PAPER NUMBER**
2663	

DATE MAILED: 11/15/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	09/587,352	KOBAYASHI, NAOFUMI	
	Examiner	Art Unit	
	Derrick W. Ferris	2663	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *24 September 2004*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-23* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-23* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *05 June 2000* is/are: a)☒ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☒ All b)☐ Some * c)☐ None of:

1.☒ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

Continued Examination Under 37 CFR 1.114

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 9/24/2004 has been entered.

Response to Amendment

2. **Claims 1-23** as amended are still in consideration for this application.

3. Examiner does **not withdraw** the obviousness rejection to *Chauh* in view of *Guerin* for Office action filed 04/26/04. In addressing applicant's arguments in the response filed 9/24/2004, applicant appears to argue the following limitation:

> *"an encapsulating unit for encapsulating the classified specified data packet defined as a QoS Guarantee target on the basis of address of QoS Guaranteeing apparatuses existing on the sides opposite to each other in a QoS target area in an IP packet switching network so that a set of the traffic appear as if being one session".*

In particular, what appears to be at issue is the term classified with respect to encapsulation. The limitation at issue is taught e.g., in Section 3.1 of *Guerin* (see rejection below).

Examiner is unclear on what applicant is attempting to argue in applicant's remarks. As such, the examiner has broken up the previous rejection into two rejections, one from a gateway source perspective and another from a gateway destination perspective. The examiner has also rewritten the original rejection to clarify the examiner's position.

Claim Rejections - 35 USC § 103

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

5. **Claims 1-17, 19, 22 and 23** are rejected under 35 U.S.C. 103(a) as being unpatentable over US Patent No. 6,519,254 to *Chauh et al.* ("*Chauh*") in view of "Aggregating RSVP-based QoS Requests" to *Guerin et al.* ("*Guerin*").

As to **claim 1**, *Chauh* discloses QoS tunnel aggregation from both a source and a destination (or receiver) perspective. Specifically, note that column 3, lines 23-57 is in relation to a source gateway perspective. *Guerin* teaches QoS tunnel aggregation from a source gateway perspective. (The rejection below is based on a QoS tunnel aggregation from a source perspective.) As such, with respect to figure 2, *Chauh* draws a correlation between a first guaranteeing apparatus 20 to TSP and a second guaranteeing apparatus 30 to TDP. Note that although figure 2 shows encapsulating the RSVP control message, *Chauh* also discloses encapsulating the data messages using an IP message, see e.g., column 3, lines 22-53. Thus the TSP contains an encapsulation unit and the TDP contains a de-encapsulation unit. Since *Chauh* teaches RSVP, a resource reservation unit for reserving resources in accordance with the QoS guarantee protocol with respect to the set of encapsulated specified data packets is also taught.

What may not be clear from the *Chauh* reference is a distinguishing unit for classifying as target traffics specified data packets and then an encapsulation unit for

encapsulating the classified specified data packets defined as a QoS guarantee target on the basis of addresses of QoS guaranteeing apparatuses existing on the sides opposite to each other in a QoS guaranteeing apparatus. In particular, *Chauh* teaches IP-in-UDP encapsulation. Thus *Chauh* teaches encapsulation, however, it may not be clear from *Chauh* that classification if further taught with respect to encapsulation. However, *Guerin* teaches classifying packets as mentioned in Section 3 starting on page 4. As such, one method of data path aggregation is to classify packets using the source and destination addresses and ports as taught in Section 3.0. However, the above method may not be optimal such that another method might be tunnel based aggregation which classifies packets as a single entry as taught in section 3.1. Using this method the destination of the TDP is used as the destination address which teaches the further limitation encapsulation unit for encapsulating the classified specified data packets defined as a QoS guarantee target on the basis of addresses of QoS guaranteeing apparatuses existing on the sides opposite to each other in a QoS guaranteeing apparatus. Both of the above methods read on the claims. Thus examiner notes that it would have been obvious to one skilled in the art to further include the limitations of a distinguishing unit for classifying as target traffics specified data packets and then an encapsulation unit for encapsulating the classified specified data packets defined as a QoS guarantee target on the basis of addresses of QoS guaranteeing apparatuses existing on the sides opposite to each other in a QoS guaranteeing apparatus. In particular, one skilled in the art would have been motivated to combine the references and teachings for the purpose of tunnel aggregation.

As such, *Guerin* teaches the above motivation e.g., in sections 3 and 3.1. Examiner notes a reasonable expectation of success since *Chauh* incorporates *Guerin*.

As to **claims 2-3**, see the rejection for claim 1.

As to **claim 4**, both references use the RSVP protocol (e.g., see *Chauh* column 3, lines 23-24).

As to **claims 5 and 6**, see figure 2 of *Chauh*.

As to **claims 7-17**, *Chauh* discloses distinguishing traffic based on IP and UDP port numbers (see column 3, lines 22-54). Examiner notes that it would have been obvious to someone skilled in the art to also use other identifiers as well such as destination and source addresses (i.e., pairs of addresses). As support and motivation, *Guerin* discloses such techniques (see Section 3 from pages 5-7).

As to **claim 19**, see column 5, lines 42-60 of *Chauh*.

As to **claims 22-23**, see figure 3 of *Chauh*. Examiner notes a reasonable but broad interpretation of "functions" (see column 3, lines 24-65; column 4, lines 1-38).

6. **Claim 18** is rejected under 35 U.S.C. 103(a) as being unpatentable over US Patent No. 6,519,254 to *Chauh et al.* ("*Chauh*") in view of "Aggregating RSVP-based QoS Requests" to *Guerin et al.* ("*Guerin*") and in further view of U.S. Patent No. 6,091,709 to *Harrison et al.* ("*Harrison*").

As to **claim 18**, both *Chauhi* and *Guerin* are silent or deficient to transmitting dummy packets in order to maintain a level of QoS. However, the examiner notes that it would have been obvious to someone skilled in the art prior to applicant's invention to use dummy packets in order to preserve QoS. As support and motivation, *Harrison*

discloses using dummy packets in order to preserve QoS such as for RSVP (e.g., see column 4, lines 56-67). Thus *Harrison* cures the deficiency by using dummy packet in order to maintain a level of QoS as is known in the art.

7. **Claims 20-21** are rejected under 35 U.S.C. 103(a) as being unpatentable over US Patent No. 6,519,254 to *Chauh et al.* ("*Chauh*") in view of "Aggregating RSVP-based QoS Requests" to *Guerin et al.* ("*Guerin*") and in further view of "Stage Refresh Timers for RSVP" to *Pan et al.* ("*Pan*").

As to **claims 20-21**, both *Chauhi* and *Guerin* are silent or deficient to using refresh timers. However, the examiner notes that it would have been obvious to someone skilled in the art prior to applicant's invention to use refresh timers. As support and motivation, *Pan* cures the deficiency by disclosing refresh timers for RSVP (e.g., see Abstract). Examiner also notes a broad but reasonable interpretation of "schedule timer".

8. **Claims 1-17, 19, 22 and 23** are rejected under 35 U.S.C. 103(a) as being unpatentable over US Patent No. 6,519,254 to *Chauh et al.* ("*Chauh*") in view of "RFC 2002 - Resource Reservation Protocol (RSVP) – Version 1 Functional Specification" to *Branden et al.* ("*Branden*").

As to **claim 1**, *Chauh* discloses QoS tunnel aggregation from both a source and a destination (or receiver) perspective. Specifically, note that column 3, lines 58-65 is in relation to a destination or receiver gateway perspective. RFC 2002 further teaches RSVP from a receiver perspective as is known in the art. (The rejection below is based on a QoS tunnel aggregation from a receiver perspective.) As such, with respect to figure 4, *Chauh* draws a correlation between a first guaranteeing apparatus 20 to TSP and a second

guaranteeing apparatus 30 to TDP. Note that although figure 4 shows encapsulating the RSVP control message, *Chauh* also discloses encapsulating the data messages using an IP message, see e.g., column 5, lines 35-41. Thus the TSP contains an encapsulation unit and the TDP contains a de-encapsulation unit. Since *Chauh* teaches RSVP, a resource reservation unit for reserving resources in accordance with the QoS guarantee protocol with respect to the set of encapsulated specified data packets is also taught. For further clarification on the process of *Chauh* see claim 1 of the patent.

What may not be clear from the *Chauh* reference is a distinguishing unit for classifying as target traffics specified data packets and then an encapsulation unit for encapsulating the classified specified data packets defined as a QoS guarantee target on the basis of addresses of QoS guaranteeing apparatuses existing on the sides opposite to each other in a QoS guaranteeing apparatus. Examiner notes that the references in combination teach the above limitation. In particular, *Chauh* explicitly teaches classifying packets at least at the TDP, see e.g., column 7, lines 13-17. However, examiner also notes that *Chauh* implicitly teaches classifying packets at the TSP since in order to perform encapsulation, packets must be matched with the appropriate IP/UDP binding, see e.g., column 5, lines 36-41. In addition, packets are also marked for discard as well. Thus packets are classified which is further dependent on encapsulation. However, assuming the implicit assumption is not clear, examiner also notes the following obviousness rejection as well. In particular, examiner notes that it would have been obvious to one skilled in the art prior to applicant's invention to further include performing packet classification at the TSP (i.e., ingress router). In particular, *Branden*

teaches the above limitation at e.g., figure 1 (which is applicant's same figure 4). Specifically, *Branden* teaches that packet classification is performed at the router for the purpose of RSVP and packet scheduling. Thus *Branden* teaches the proposed modification where the motivation is to classify packets to use RSVP and for packet scheduling. As both references use a receiver-based method, examiner also notes a high reasonable expectation level of success.

As to **claims 2-3**, see the rejection for claim 1.

As to **claim 4**, both references use the RSVP protocol (e.g., see *Chauh* column 3, lines 23-24).

As to **claims 5 and 6**, see figure 4 of *Chauh*.

As to **claims 7-17**, *Chauh* discloses distinguishing traffic based on IP and UDP port numbers (see column 5, lines 36-41). Examiner notes that it would have been obvious to someone skilled in the art to also use other identifiers as well such as destination and source addresses (i.e., pairs of addresses). As support and motivation, *Guerin* discloses such techniques (see Section 3 from pages 5-7).

As to **claim 19**, see column 5, lines 42-60 of *Chauh*.

As to **claims 22-23**, see figure 3 of *Chauh*. Examiner notes a reasonable but broad interpretation of "functions" (see column 3, lines 24-65; column 4, lines 1-38).

9. **Claim 18** is rejected under 35 U.S.C. 103(a) as being unpatentable over US Patent No. 6,519,254 to *Chauh et al.* ("*Chauh*") in view of "RFC 2002 - Resource Reservation Protocol (RSVP) – Version 1 Functional Specification" to *Branden et al.* ("*Branden*") and in further view of U.S. Patent No. 6,091,709 to *Harrison et al.* ("*Harrison*").

As to **claim 18**, both *Chauhi* and *Guerin* are silent or deficient to transmitting dummy packets in order to maintain a level of QoS. However, the examiner notes that it would have been obvious to someone skilled in the art prior to applicant's invention to use dummy packets in order to preserve QoS. As support and motivation, *Harrison* discloses using dummy packets in order to preserve QoS such as for RSVP (e.g., see column 4, lines 56-67). Thus *Harrison* cures the deficiency by using dummy packet in order to maintain a level of QoS as is known in the art.

10. **Claims 20-21** are rejected under 35 U.S.C. 103(a) as being unpatentable over US Patent No. 6,519,254 to *Chauh et al.* ("*Chauh*") in view of "RFC 2002 - Resource Reservation Protocol (RSVP) – Version 1 Functional Specification" to *Branden et al.* ("*Branden*") and in further view of "Stage Refresh Timers for RSVP" to *Pan et al.* ("*Pan*").

As to **claims 20-21**, both *Chauhi* and *Guerin* are silent or deficient to using refresh timers. However, the examiner notes that it would have been obvious to someone skilled in the art prior to applicant's invention to use refresh timers. As support and motivation, *Pan* cures the deficiency by disclosing refresh timers for RSVP (e.g., see Abstract). Examiner also notes a broad but reasonable interpretation of "schedule timer".

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Derrick W. Ferris whose telephone number is (571) 272-3123. The examiner can normally be reached on M-F 9 A.M. - 4:30 P.M. E.S.T.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Chau Nguyen can be reached on (571) 272-3126. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Derrick W. Ferris
Examiner
Art Unit 2663

DWF

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11/10/06